Approved For Release 2007/01/16 : C	TOP SECRET	25X
(c) NATIC	Attachment to  Page 1	<b>⊒</b> 5X
REFERENCE:	HF SPHERICAL/CIRCULAR ARRAY FACILITY NIKOLAYEV, USSR	25X
1. <u>SIGNIFICANCE</u> :	LARGE-SCALE PHOTOGRAPHY REVEALS EXPANSION  AND CONSTRUCTION. ADDITIONAL RHOMBIC AN- TENNAS AND VERTICAL RADIATORS ARE NEWLY IDEN- TIFIED.	
2. REMARKS:	THE SPHERICAL/CIRCULAR ARRAY IS A HIGH FRE- QUENCY TRANSMITTING FACILITY. THE ONLY OTHER FACILITY OF NEARLY IDENTICAL SIZE AND CONFIGURA- TION HAS BEEN OBSERVED NEAR TALDOM. A SMALLER VERSION HAS BEEN OBSERVED AT RUSTAVI AND PODOLSK.	
3. LOCATION:	12.5 NM SOUTHEAST OF NIKOLAYEV.	] 25X <sup>-</sup>
5. FIRST IDENTIFICATION	:	25X
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Attachment to 2 May 1966

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NEGATION DATE:

NONE.

SUBSEQUENT COVERAGE: 7.

12 KH-4 & ONE KH-7 MISSIONS.

8. DIMENSIONS: 13 TOWER ARRAY:

600 FT HIGH

FIXED FEED TOWERS: 475 FT HIGH

FEED:

75 FT LONG

9 TOWER ARRAY:

330 FT HIGH

MOVABLE FEED TOWER: 250 FT HIGH

FEED:

80 FT LONG

9. MISSION READOUT: THE PREVIOUSLY REPORTED 13 AND 9 GUYED-TOWER

ARRAYS ARE 600 AND 330 FT HIGH RESPECTIVELY.

THE 9 TOWER ARRAY HAS ONE MOVABLE FEED TOWER MOUNTED ON TWO TRACKS. A THIRD TRACK IS NOW OBSERVED TO THE REAR AND APPEARS TO HAVE AN ELEC-TRONIC COUPLING FUNCTION. THE 9 TOWER ARRAY IS FED BY AT LEAST TWO TRANSMISSION LINES WHICH RUN FROM ONE OF THE LARGE TRANSMITTING BUILDINGS TO A PROBABLE TUNING BUILDING, AND THEN CONTINUE TO THE FEED TOWER. FEED TOWER IS APPROXIMATELY 250 FT HIGH WITH A HORIZONTAL BOOM-TYPE FEED APPROXIMATELY 80 FT LONG.

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THE 13 TOWER ARRAY IS FED BY AT LEAST THREE TRANSMISSION LINES  FROM ITS TRANSMITTING BUILDING TO A PROBABLE TUNING BUILDING. FROM  THIS BUILDING, THE ANTENNA IS FED BY AT LEAST FOUR TRANSMISSION LINES  TO THE FEED TOWERS (TWO FIXED TOWERS EACH 475 FT HIGH). THE FEED TOWERS  EACH HAVE A HORIZONTAL BOOM-LIKE FEED APPROXIMATELY 75 FT IN LENGTH.  APPROXIMATELY 6 NEW RHOMBIC ANTENNAS HAVE BEEN CONSTRUCTED IN THE  EXPANDED HF COMMUNICATIONS AREA, WHICH IS NOW FENCE-SECURED WITH THE  ORIGINAL FACILITY.  TWO NEWLY IDENTIFIED VERTICAL RADIATORS, 400 FT AND 650 FT HIGH,  ARE LOCATED IN THE SOUTHERN PORTION OF THE ORIGINAL FACILITY. APPROX-  IMATELY 4,000 FT FROM THE SOUTHERN CORNER OF THE ORIGINAL FACILITIES,  AN UNIDENTIFIED AREA IS OBSERVED CONTAINING 9 SMALL ADJOINING EXCAVA-  TIONS WHICH ARE CONNECTED BY CABLE SCARS TO ONE OF THE TRANSMITTING AREAS.  A NEW CONTROL BUILDING UNDER CONSTRUCTION, IS 15	TOP SECRET	25 <b>X</b>
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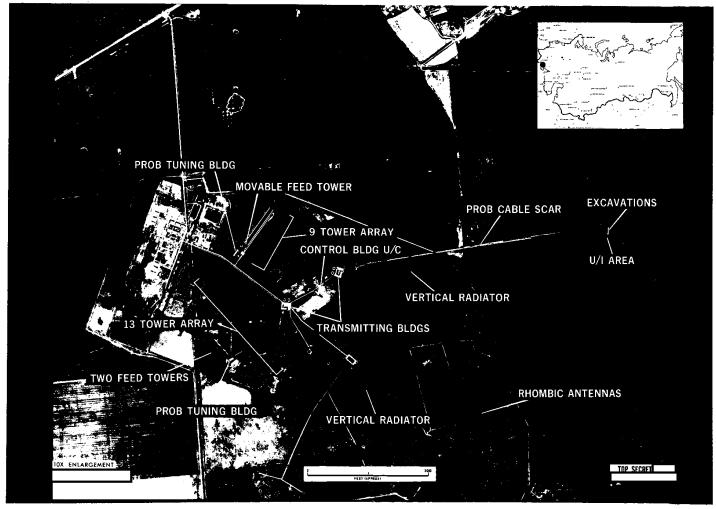
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HF SPHERICAL/CIRCULAR ARRAY FACILITY

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